

PATENT COOPERATION TREATY

TRANSLATION

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

Date of mailing (day/month/year) See Form PCT/ISA/210

Applicant's or agent's file reference

P2004, 0009WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2004/013590

International filing date (day/month/year)

30.11.2004

Priority date (day/month/year)

08.01.2004

International Patent Classification (IPC) or both national classification and IPC

H01 P1/213, H01 P5/10, H01 P1 /205

Applicant

EPCOS AG

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/IEP

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Form IX-715A/237 (Box No. 1) (January 2004)

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Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-10	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO
2. Citations and explanations:			
<p>1. Reference is made to the following documents:</p> <p>D1: JP 62 235801 A (FUJI ELELCTROCHEM CO LTD) 16 October 1987 (1987-10-16)</p> <p>D2: US-A-5 572 175 (TADA ET AL) 5 November 1996 (1996-11-05)</p> <p>D3: PATENT ABSTRACTS OF JAPAN Vol. 2003, No. 11, 5 November 2003 (2003-11-05) & JP 2003 209413 A (TOKO INC), 25 July 2003 (2003-07-25)</p>			
<p>2. The present application fails to comply with the requirements of PCT Article 33(1) since the subject matter of claims 1-10 is not based on an inventive step within the meaning of PCT Article 33(3).</p>			
<p>2.1. Document D1 is considered the prior art closest to the subject matter of claim 1. It discloses (the references in parentheses apply to this document):</p> <p>a duplexer (abstract), comprising an Rx filter, a Tx and a decoupler and/or delay line (drawing 3), in which both filters are embodied in a common</p>			

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

Feature 2) merely involves the integration of a known discrete balun with an Rx filter.

Document D2 describes a filter (drawing 11) and a duplexer (drawing 18), wherein an electronic circuit is arranged under the filter in a recess of the ceramic body such that the filter and the duplexer with the electronic circuit together have a uniform height.

Although the electronic circuit in D2 is not a balun, this is irrelevant since the problem being addressed is solely that of integration, and for this reason the balun aspect is not important. For both these reasons, the subject matter of claim 1 does not involve an inventive step.

- 2.2 The features contained in dependent claims 2-10 are either known from documents D1-D3, or are standard practice in the art, or are only one of several obvious possibilities from which a person skilled in the art would choose according to the circumstances, without this involving an inventive step, in order to solve the problem being addressed. Hence, the subject matter of claims 2-10 does not involve an inventive step within the meaning of EPC Article 56.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

3. The application fails to comply with the requirements of PCT Article 6, since claim 1 is not clear.
 - 3.1. It would appear from the description that the following feature is essential to the definition of the invention:
 - comprising ... a conductor connected between the two filters (page 3, lines 21-23).Since independent claim 1 does not contain this feature, it fails to comply with the requirement of PCT Article 6 in conjunction with PCT Rule 6.3(b) that each independent claim must include all the technical features essential to the definition of the invention.
 - 3.2. The relative terms ("...front surface...", "...on the lower side...", "...arranged under the Rx filter...") used in claim 1 have no generally acknowledged meaning, and leave the reader uncertain as to the meaning of the technical features in question. As a result, the subject matter of the said claim is not clearly defined (PCT Article 5).
 - 3.3. It is not clear how the balun and the Rx filter are connected. The applicant is requested to explain the connection between the filter and the balun.

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3.4. The term "height" used in claim is vague and unclear (what is the height? - the height of the resonators, or the width of the ceramic bodies?) and leaves the reader uncertain as to the meaning of the technical feature(s) in question. As a result, the subject matter of the said claim is not clearly defined (PCT Article 6). The applicant is requested to define "height" in this context.